Amendments to the Claims:

This following listing of claims will replace all prior versions and listings of claims in the application.

1. (currently amended) In a network device operative to control data flows transmitted between hosts connected to a computer network, wherein at least some of the hosts employ slow-start mechanisms, a method comprising

estimating the initial rate demand for a data flow between a first host and a second host;

estimating the number of packets that the first host will transmit before achieving the initial rate demand;

setting at least one threshold based on the number of packets in the second estimating step;

allocating bandwidth for the flow, wherein the allocated bandwidth is a fraction of the initial rate demand for the flow;

maintaining a count of the packets associated with the flow; and

increasing the bandwidth allocated to the flow as the count crosses at least one threshold; wherein the estimating the number of packets that the first host will transmit before achieving the initial rate demand comprises

estimating the round trip time between the first and second host;

multiplying the initial demand rate associated with the data flow by the round trip time; and

dividing the product of the multiplying step by an average packet size.

2. (original) The method of claim 1 further comprising

estimating the number of bytes that the first host will transmit before achieving the initial rate demand; and

setting the at least one threshold based on the number of bytes in the second estimating step.

3. (original) The method of claim 2 wherein the second estimating step comprises

estimating the round trip time between the first and second host; and

multiplying the initial demand rate associated with the data flow by the round trip time.

4. (original) The method of claim 3 wherein the round trip time is based on an analysis of the arrival times of the handshake packets corresponding to the data flow.

5. (original) The method of claim 1 wherein the initial rate demand is based on an analysis of the arrival times of at least one of the handshake packets corresponding to the data flow.

6. (original) The method of claim 5 wherein the initial rate demand is based on an analysis of at least one data packet corresponding to the data flow.

7. (original) The method of claim 1 wherein the initial rate demand is based on an analysis of at least one data packet corresponding to the data flow.

8. (canceled)

9. (canceled)

10. (currently amended) The method of claim [[9]] 1 wherein the average packet size is a static parameter.

11. (original) The method of claim 10 wherein the average packet size is a configurable parameter.

12. (currently amended) The method of claim [[9]] 1 wherein the average packet size is a dynamic parameter that changes based on observations of the packets traversing the network device.

13. (currently amended) The method of claim [[9]] 1 wherein the round trip time is based on an analysis of the arrival times of the handshake packets corresponding to the data flow.

14. (currently amended) The method of claim [[8]] 1 wherein the initial rate demand is based on an analysis of the arrival times of at least one of the handshake packets corresponding to the data flow.

15. (original) The method of claim 14 wherein the initial rate demand is based on an analysis of at least one data packet corresponding to the data flow.

16. (currently amended) The method of claim [[8]] 1 wherein the initial rate demand is based on an analysis of at least one data packet corresponding to the data flow.

17. (original) The method of claim 1 further comprising
      monitoring for at least one indication that the sending host has re-initiated the slow start mechanism for the data flow;
          upon detection of at least one of the indications,
               resetting the count of the packets for the flow; and
               repeating the allocating, maintaining and increasing steps.

18. (currently amended) The method of claim 17 wherein the monitoring step comprises
      determining whether at least one data packet corresponding to the data flow is a re-transmission of a previous packet.

19. (original) The method of claim 18 wherein the monitoring step further comprises
      determining whether the re-transmitted packet arrived a threshold period of time after the last packet corresponding to the data flow.

20. (currently amended) The method of claim 17 wherein the monitoring step comprises

determining whether the packet arrived a threshold period of time after the last packet corresponding to the data flow.

21. - 31. (canceled)

32. (currently amended) An apparatus facilitating control data flows transmitted between hosts connected to a computer network, wherein at least some of the hosts employ slow-start mechanisms, comprising

a packet processor operative to

detect a data flow in network traffic traversing a communications path;

maintain a count of the packets associated with the data flow;

a path rate detection module operative to

estimate the initial rate demand for a data flow;

estimate, for the data flow, the number of packets that a sending host will transmit before achieving the initial rate demand by estimating the round trip time between the sending and receiving host; multiplying the initial demand rate associated with the data flow by the round trip time; and dividing the product of the multiplying step by an average packet size;

a bandwidth allocation module operative to

allocate bandwidth to the data flow based in part on a target rate associated with the data flow; and

wherein the apparatus is operative to

set the initial target rate for the data flow as a fraction of the initial rate demand for the flow; and

increase the target rate associated with the data flow as the count of packets crosses a threshold value, wherein the threshold value is based at least in part on the estimated number of packets the sending host will transmit before achieving the initial rate demand.

33. (original) The apparatus of claim 32 wherein the apparatus is further operative to

        monitor for at least one indication that the sending host has re-initiated the slow start mechanism for the data flow; and

          upon detection of at least one of the indications,

                reset the count of packets for the flow; and

                reset the target rate for the data flow to the initial target rate.

34. (canceled)

35. (currently amended) The apparatus of claim 32 [[34]] wherein the average packet size is a static parameter.

36. (currently amended) The apparatus of claim 32 [[34]]wherein the average packet size is a configurable parameter.

37. (currently amended) The apparatus of claim 32 [[34]] wherein the average packet size is a dynamic parameter that changes based on observations of the packets traversing the network device.

38. (currently amended) The apparatus of claim 32 [[34]] wherein the round trip time is based on an analysis of the arrival times of the handshake packets corresponding to the data flow.

39. (original) The apparatus of claim 32 wherein the initial rate demand is based on an analysis of the arrival times of at least one of the handshake packets corresponding to the data flow.

40. (original) The apparatus of claim 39 wherein the initial rate demand is based on an analysis of at least one data packet corresponding to the data flow.